

# Newton's 1st Law & Resulting Motion WS 5

Use the position vs. time graph of a dog walking down a street to answer the following questions.

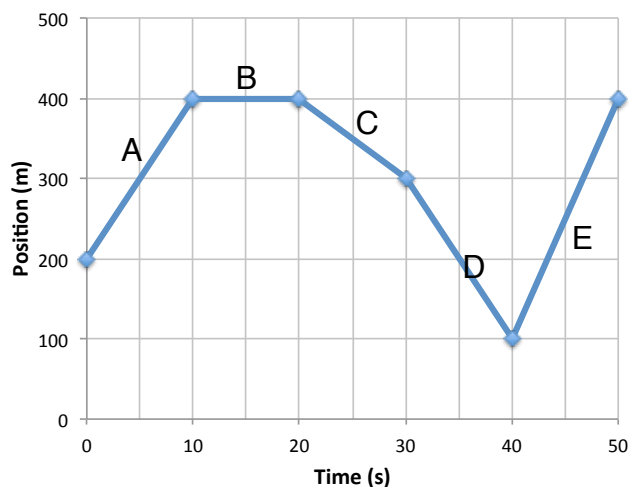
1. What is the displacement after each 10 second time interval?

A: \_\_\_\_\_ D: \_\_\_\_\_

B: \_\_\_\_\_ E: \_\_\_\_\_

C: \_\_\_\_\_

2. What is the total distance traveled by the dog? Show all work.



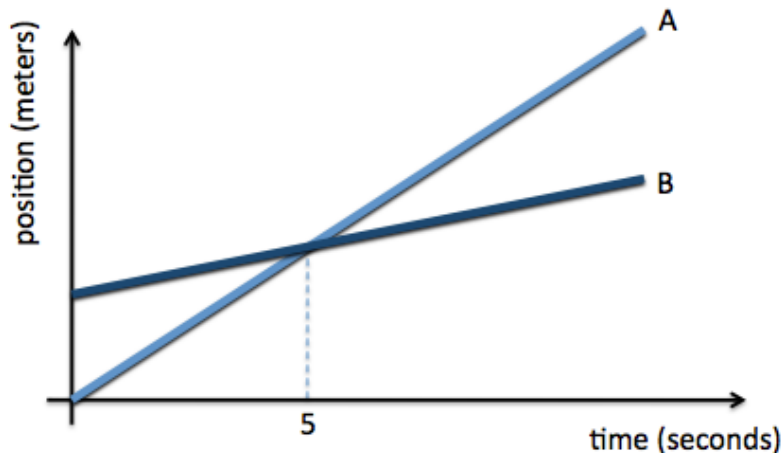
3. What is the total displacement of the dog? Show all work

GIVEN VARIABLES	EQUATION	WORK / PICTURE	ANSWER

Consider the position vs. time graph below that represents the motion of two bicyclists.

4. Circle the letter of the cyclists that is faster.

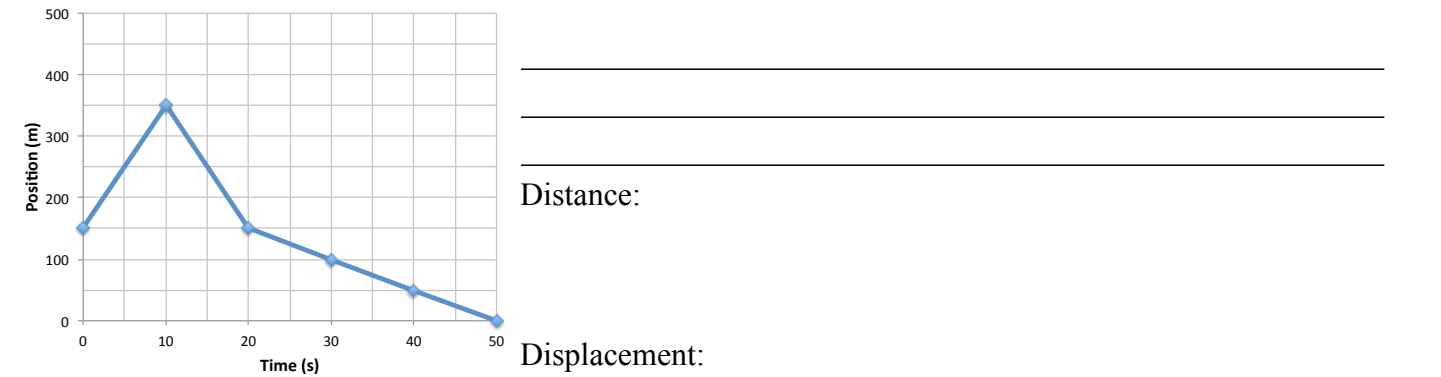
5. Do the cyclists start at the same point? If not, which one starts ahead? How do you know?



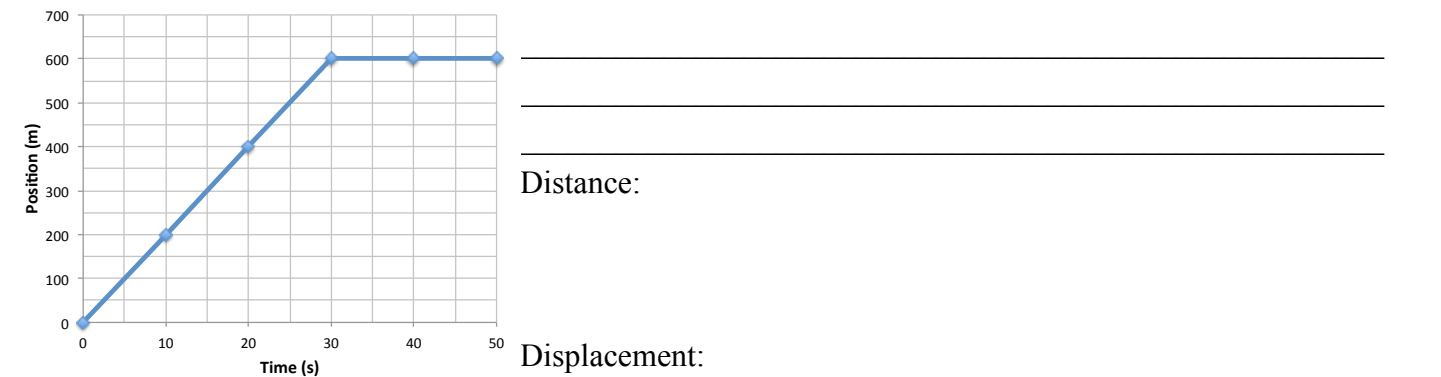
6. At  $t = 7.00$  s, which cyclist is ahead? How do you know?

7. What is happening at the intersections of lines A and B?

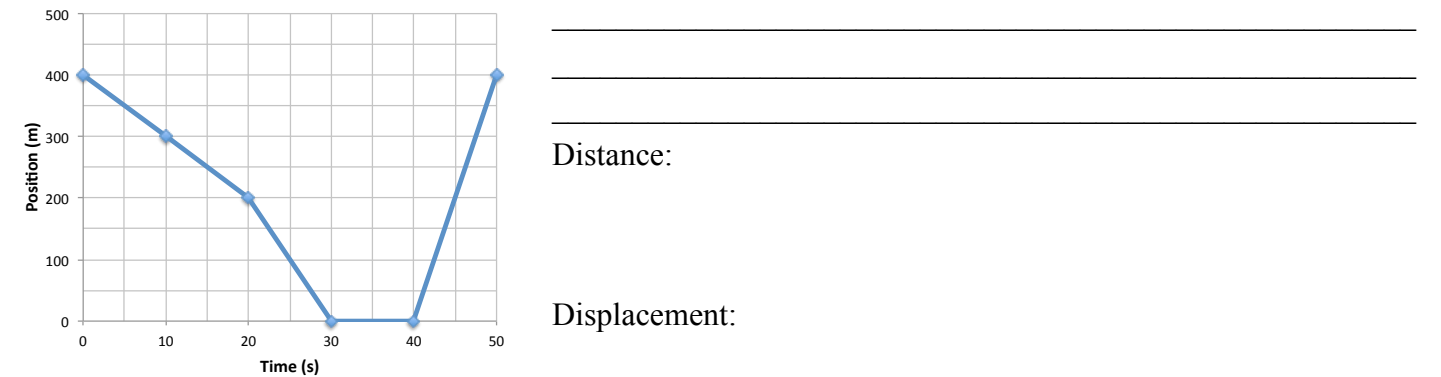
8. Write a description of the motion that you see in each position vs. time graph. Then determine the total distance and the total displacement. Show all work.



GIVEN VARIABLES	EQUATION	WORK / PICTURE	ANSWER



GIVEN VARIABLES	EQUATION	WORK / PICTURE	ANSWER



GIVEN VARIABLES	EQUATION	WORK / PICTURE	ANSWER